

BEFORE THE
POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON

WEYERHAEUSER COMPANY, [Longview)	
Plant],)	
)	
Appellant,)	PCHB Nos. 86-224
)	and 87-33
v.)	
)	FINAL FINDINGS OF FACT,
State of Washington, DEPARTMENT)	CONCLUSIONS OF LAW
OF ECOLOGY,)	AND ORDER
)	
Respondent.)	

THIS MATTER involves appeals by the Weyerhaeuser Company of two Department of Ecology Orders (No. DE 86-714 - our number PCHB 86-224, and No. DE 87-103 - our number PCHB 87-33). The Orders assert that on July 17, 1986, October 23, 1986, and November 12, 1986 Weyerhaeuser violated the pH limitations in NPDES permit No. WA-000012-4, in violation of RCW 90.48.180. Total penalties of \$30,000 were assessed. The appeals were consolidated for hearing. The Pollution Control Hearings Board held a formal hearing on June 11 and 12, 1987, in Lacey, Washington. Board members present were Judith A. Bendor (Presiding), Lawrence J. Faulk (Chairman), and Wick Dufford.

1 Appellant Weyerhaeuser was represented by Attorneys Charles K.
2 Douthwaite and Susan L. Preston. Respondent Washington State
3 Department of Ecology ("DOE") was represented by Assistant Attorney
4 General Charles W. Lean. Reporters from Gene Barker & Associates
5 recorded the proceedings.

6 Pre-Hearing briefs, case law, exhibits, and proposed findings of
7 fact and conclusions of law and order were filed, admitted and
8 examined; testimony and argument were heard. From the foregoing, the
9 Board makes these

10 FINDINGS OF FACT

11 I

12 Appellant Weyerhaeuser is a corporation under the laws of the
13 State of Washington with its business offices located in Federal Way,
14 Washington. It owns and operates a large industrial complex,
15 employing about 1,200 workers in Longview, Washington, with annual
16 sales of \$37.7 million. The complex includes a pulp mill, a paper
17 plant and a chlorine plant. The plants have combined their wastewater
18 which discharges into the Columbia River (Class A waters) through
19 outfalls numbers 001 and 002.

20 At all times relevant to this case, Weyerhaeuser's discharges
21 through these outfalls were subject to the terms and conditions of a
22 National Pollutant Discharge Elimination System ("NPDES") Waste
23 Discharge Permit No. WA-000012-4, issued by the State of Washington
24 Department of Ecology.

25
26 FINAL FINDINGS OF FACT,
27 CONCLUSIONS OF LAW & ORDER
PCHB Nos. 86-224 & 87-33

II

DOE is a state agency authorized to implement the State water pollution control statutes and, in that capacity, to issue a NPDES permit for the discharge of industrial wastewater into waters of the state and to monitor compliance with the terms and conditions of such permits.

III

NPDES permit WA No. 000012-4 was issued to Weyerhaeuser by DOE on October 7, 1985. It contains numerous conditions, among which the following ones are relevant herein:

SPECIAL CONDITIONS

S1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from the following outfalls subject to the stated limitations and monitoring requirements:

OUTFALL 001 and 002

<u>Parameter</u>	<u>EFFLUENT LIMITATIONS</u>		<u>MONITORING REQUIREMENTS</u>	
	<u>Daily Average^{a/}</u>	<u>Daily Maximum</u>	<u>Frequency</u>	<u>Sample Type</u>

[. . .]

<u>pH</u>	5.0 to 9.0 at all times ^{b/} [Emphasis added]		Continuous	Recording
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[. . .]

^{b/} All excursions outside the 5.0 to 9.0 pH range shall be considered violations, (i.e., 40 CFR 401.17 shall not apply to this discharge). The instantaneous maximum and minimum pH shall be reported monthly.

[. . .]

FINAL FINDINGS OF FACT,
CONCLUSIONS OF LAW & ORDER
PCHB Nos. 86-224 & 87-33

General Conditions

- G1. All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a level in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of the permit.
- G2. The permittee shall at all times properly operate and maintain all facilities and systems of collection, treatment, and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit.
- G3. The permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G4. [Permittee's Provision of Information re Noncompliance]

[. . .]

In addition, the permittee shall take immediate action to stop, maintain, and clean up any unauthorized discharges and take all reasonable steps to minimize any adverse impacts to waters of the state and correct the problem. [. . .]

G12. All other requirements of 40 CFR Part 122.41 and 122.42 are incorporated into this permit by reference.

G13. Nothing in this permit shall be construed as excusing the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

The permit requires that the pH of the discharge be monitored and reported continuously. Monthly monitoring results are to be summarized and reported by the permit holder on the Discharge Monitoring Report

1 form ("DMR") and mailed to DOE no later than 15 days after the month's
2 end. Condition S2.

3 IV

4 In issuing the permit, DOE explicitly refused to allow any
5 variation from continuous compliance with the 5.0 to 9.0 pH range.

6 The reference in footnote b/ to 40 CFR 401.17 is to a 1982
7 regulation of the United States Environmental Protection Agency (EPA)
8 which allows dischargers who continuously monitor pH to exceed pH
9 limitations imposed about one percent of the time. This regulatory
10 "variance" applies in NPDES permits issued by EPA.

11 In March of 1984 DOE stated its policy in response to EPA's
12 "variance" regulation. The state agency took the position that
13 allowing the "variance" would allow the violation of state toxicity
14 standards, threatening aquatic life in the immediate area of the
15 discharge. After issuing the current NPDES permit, DOE cited this
16 policy in explaining to Weyerhaeuser its reason for refusing to adopt
17 EPA's more lenient approach.

18 Thus, the DOE refused to implement the federal pH "variance" in
19 this state-issued permit, using water quality concerns as a basis.

20 V

21 Weyerhaeuser appealed the NPDES permit, including the refusal to
22 allow any pH excursions outside the 5.0 to 9.0 range. DOE and
23

1 Weyerhaeuser, after a prehearing conference before this Board on March
2 11, 1986, agreed to settle the pH issue by modifying footnote b/ as
3 follows:

4 pH 5.0 to 9.0 at all times. b/

5 b/ indicates the range of permitted values. Excursions
6 between 4.0 and 10.0 shall not be considered violations
7 provided no single excursion exceeds 60 minutes in
8 length and total excursions do not exceed 7 hours and
30 minutes per month. Any excursions below 4.0 or
above 10.0 shall be considered violations.

9 The effect of this settlement was to allow an EPA-type "variance"
10 only within the stated limits. Beyond the 4.0 to 10.0 range no pH
11 "variance" was to be allowed.^{1/}

12 VI

13 The Weyerhaeuser Longview plants discharge their combined
14 wastewater of approximately 65 million gallons a day into the Columbia
15 River at 2.1 miles downstream from the Longview Bridge. The pH
16 effluent levels are measured for permit purposes just before the
17 outfalls 001 and 002's discharge into the fresh water of the River.

18 A clean water sewer is used for the discharge of non-contact
19 cooling water and storm water from the chlorine plant. Wastewaters
20 within this clean water sewer are not fed through the treatment plant

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22 ^{1/} The revised footnote b/ was not actually inserted in
23 Weyerhaeuser's permit during the period in question, but DOE
24 nonetheless has observed the agreement in the exercise of its
25 enforcement discretion.

1 for the complex. Rather, they join the treated discharges downstream
2 of the treatment plant, thereby obtaining the advantage of dilution in
3 the much larger volume of effluent from the pulp and paper facilities.
4 The clean water sewer accounts for approximately three million gallons
5 of the 65 million gallons per day of total discharge through the
6 outfalls. Prior to 1980 this clean water sewer discharge went directly
7 to the river through a separate outfall.

8 On occasion acid or caustic escapes from within the chlorine plant
9 and ends up in the clean water sewer. The "treatment facilities" for
10 such discharges are several in-plant neutralization systems. The pH
11 exceedances in question were events when in-plant controls failed to
12 neutralize wastes before discharge to the river. No holding ponds
13 existed to retain these wastes until neutralization occurred.

14 VII

15 A pH of less than 7.0 is acidic; more than 7.0 is basic (or
16 caustic). Since the pH scale is logarithmic, a pH discharge of 3.0,
17 for example, is 10 times more acidic than one of 4.0, and 100 times
18 more acidic than a discharge of 5.0, and so forth.

19 VIII

20 Appellant Weyerhaeuser submitted the July 1986 DMRs for NPDES
21 permit No. WA-000012-4 on August 14, 1986. The DMRs showed that on
22 July 27, 1986, the discharges had a pH below the effluent limits for 14
23 minutes, with a minimum pH effluent of 1.5. As a result of these
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1 discharges, DOE issued Order of Penalty No. DE 86-714 on November 10,
2 1986 assessing a penalty of \$10,000. (Note that DE 86-714 has an
3 incorrect date for the violation, July 17, 1986, since corrected on the
4 record.) Appellant filed an appeal with this Board on December 16,
5 1986. (PCHB No. 86-224).

6 IX

7 Weyerhaeuser's October 1986 DMRs showed that on October 23, 1986
8 there were 20 minutes of discharges from the outfalls where the pH
9 effluent limits were exceeded and the discharges reached a maximum of
10 pH 11.3. (These DMRs reported additional permit pH exceedences on
11 October 10 and 24, which are not the subject of the Orders appealed
12 herein.)

13 The November 1986 DMRs showed that on November 12, 1986 the
14 discharges exceeded pH of 5 for 23 minutes, and reached a minimum of pH
15 2.0. (Total suspended solids excursions reported in the DMRs are not
16 the subject of the Orders appealed herein).

17 As a result of these October 23 and November 12, 1987 discharges,
18 DOE issued Notice of Penalty No. DE 87-103 on January 16, 1987,
19 assessing a \$20,000 penalty from which an appeal was filed with this
20 Board on February 18, 1986, (PCHB No. 87-33).

21 By Order the two appeals were consolidated for hearing.

22 X

23 Appellant admits that all the aforementioned discharges exceeded
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the permit effluent limits, but contends that "upset conditions" existed that legally excuse the exceedences under 40 CFR Section 122.41(n) and permit condition G.12, and thus no violation of the NPDES permit or of Chpt. 90.48 RCW has occurred.

XI

The July 27, 1986 pH exceedences were due to an unanticipated in-plant acid leak, which was followed by the failure of a lime rock pit to neutralize the flow. Sodium bicarbonate was added to the effluent, but not in sufficient quantity to control the amount of acid released. Evidence shows that the pit had not been filled to capacity with lime.

The October 23, 1986, pH exceedences were due to a mill-wide power outage from the power company. The chlorine plant's pumps then ceased to function which led to flooding and contamination of the plant's clean water sewer with high pH caustic. There was no holding pond capacity to store the flow, and it was discharged unneutralized into the River. No back-up power system was available for immediate use in the chlorine plant. It took two hours for temporary power to be in operation.

The November 12, 1986 pH exceedences were initiated by a loss of caustic to the clean sewer. The automatic neutralization system sensed the caustic and started a flow of sulfuric acid to the sewer to

1 neutralize it. However, the acid flow controller malfunctioned
2 allowing too much acid to be injected. Again spill pond storage was
3 not available to contain the acidic flow until it could be neutralized.
4

5 XII

6 Weyerhaeuser wrote DOE in December of 1986 and identified a series
7 of improvements which could be taken to upgrade the ability of the
8 chlorine plant to control pH in the clean water sewer.

9 On January 28, 1987, DOE issued Order No. DE 87-104 requiring
10 Weyerhaeuser to undertake the measures the company had proposed and
11 ordering specified actions to be completed by April 1, 1987. As a
12 result, in part, of the exceedences at issue and responding to DOE's
13 Order No. DE 87-104, appellant spent \$66,000 to upgrade the pH
14 neutralization capacity to prevent future pH violations. In addition,
15 a back-up power system has been provided.

16 These changes involve both known, available, and reasonable
17 technology, e.g. standby power, providing spill pond capacity, and
18 basic maintenance, e.g. replenishing the lime rock. The chlorine
19 plant, which covers 25 acres of ground and operates on three shifts a
20 day for 360 days a year, is a complicated facility, involving the use
21 of highly dangerous acid and caustic materials. In such an
22 installation, there is a likelihood that things will from time to time
23 go wrong. And this likelihood presents a substantial risk of harm.
24 While not all problems can be precisely predicted, we believe that
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1 events of the general type and magnitude of the three occurrences under
2 review could reasonably have been anticipated, and prevented by proper
3 design and maintenance before the violations occurred.

4 Thus, we find that the pH exceedances in July, October and
5 November 1986, for which penalties were issued, were not the result of
6 factors beyond the reasonable control of permittee. Further, we find
7 that the installation of the steps taken in 1987, were necessary for
8 the permittee to render the "treatment facilities" for the chlorine
9 plant adequate, and to fulfill its permit requirements to properly
10 operate and maintain "the treatment plant" at all times and to "control
11 discharges" as those terms are used in G.2 and G.3 of the permit.

12 XIII

13 The events at issue involved significant violations of the
14 effluent limits, especially considering the logarithmic character of
15 the pH scale. No evidence was presented of adverse impacts on public
16 health or the environment.

17 XIV

18 The Weyerhaeuser Longview facility as a whole has an extensive
19 recent history of failing to comply with NPDES permit conditions. For
20 example, between 1981 and 1985 twenty penalties were issued for NPDES
21 permit violations, with payments totalling \$23,000. (Maximum penalty
22 levels have since been statutorily increased.) In January 23-25, 1986,
23 appellant bypassed wastewater for which an \$8,000 fine was paid. On
24
25

1 May 7, 1986, Weyerhaeuser's Longview plant exceeded permit conditions
2 for BOD (biological oxygen demand) and TSS (total suspended solids),
3 and on May 10, 1986 for TSS, and paid a \$24,000 penalty for these May
4 violations. A number of exceedances reported in DMRs have not been the
5 subject of penalty assessments.

6 Specifically, as to reported pH exceedances alone, DOE's records
7 show the following pattern of violations (eliminating double counting
8 of 001 and 002 outfalls); 1982-1; 1983-3; 1984-3; 1985-10; 1986-10.

9 Problems with meeting pH limits prompted the change in 1980 from
10 direct discharge to the river, to tying the chlorine plant clean water
11 sewer into the main effluent lines from the treatment plant for the
12 pulp and paper facilities, to increase dilution. Recognition of
13 continuing compliance problems led to the expenditure of \$117,000 for
14 various in-plant controls in late 1985 and early 1986. The experience
15 of the exceedances at issue demonstrates that in mid and late 1986, the
16 problem remained unremedied.

17 XV

18 Any Conclusion of Law which is deemed a Finding of Fact is hereby
19 adopted as such.

20 From these Findings of Fact, the Board comes to these

21 CONCLUSIONS OF LAW

22 I

23 The Board has jurisdiction over these persons and these matters.
24 Chapters 43.21B and 90.48 RCW.

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26 FINAL FINDINGS OF FACT,
27 CONCLUSIONS OF LAW & ORDER
PCHB Nos. 86-224 & 87-33

II

RCW 90.48.160 requires industrial operations which release liquid waste to obtain a permit. The NPDES permit issued to appellant Weyerhaeuser is an example of such a permit and fulfills the demands of both state and federal law. RCW 90.48.260. The permit was issued under the authority of RCW 90.48.180.

III

RCW 90.48.144 empowers the Department of Ecology to impose civil penalties on a strict liability basis. In pertinent part, it reads:

Every person who:

- (1) Violates the terms or conditions of a waste discharge permit issued pursuant to RCW 90.48.180 . . .
 - (3) . . . shall incur, in addition to any other penalty as provided by law, a penalty in an amount of up to ten thousand dollars a day for every such violation.
- [. . .]

The permittee is allowed to discharge only that wastewater which conforms to permit effluent limits. Condition S1.

IV

Following the decision in Marathon Oil Co. v. Environmental Protection Agency, 564 F.2d 1253 (9th Cir. 1987), EPA was obliged to recognize an upset defense for certain NPDES exceedances beyond the reasonable control of the dischargers. In response, EPA amended 40 CFR 122.41(n) to include a formal upset provision. The definition of "Upset" provided in the regulation is as follows:

"Upset" means an exceptional incident in which there is unintentional and temporary

noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (Emphasis added).

V

NPDES permits issued by the State may be stricter than standards established by the "EPA". 33 U.S.C. 1370. Marathon Oil, therefore, does not limit the state as it does EPA. States may omit the upset defense from their permits altogether. Sierra Club v. Union Oil Company, 813 F.2d 1480 (9th Cir. 1987).

The permit is to be read as a whole, to give it meaning within the context of statute and regulation. The pH limit (S1 and footnote b) clearly states that any excursions below or above the stated range "shall be considered violations." (Emphasis added). Moreover, the permit requires appellant at all times to properly operate and maintain its facility to achieve compliance with its permit (G.2), and to control production and discharges, including when the primary source of power fails, to maintain compliance with the permit (G.3). The permit's incorporation of 40 CFR 122.41 is partial, and only fills in gaps not covered by the specific permit.

Reading the permit as a whole, in the context of a strict liability state water pollution statute, we conclude that the upset

1 defense is not a part of the permit's pH effluent limitations. See,
2 Sierra Club, supra.

3 VI

4 Appellant argues unconvincingly that because the State has
5 neither designated the Columbia River a "water-quality limited
6 segment," nor done a waste load allocation for the River, the pH
7 limitation is therefore not based on water quality concerns and the
8 upset defense exists.

9 Denial of an upset defense's existence does not depend on there
10 being a demonstrated violation of water-quality standards. The key
11 factor is the purpose of the limitation in question not the results
12 of their violation. All effluent limitations are based to some
13 degree on technology. In some cases the level of control to be met
14 is required simply because it can readily be achieved. In other
15 cases the limits are imposed in order to protect against perceived
16 danger of adverse effects. In the latter case the limitations cannot
17 sensibly be characterized as "technology-based" as that term is used
18 in 40 CFR 122.41(n).

19 Here, DOE has imposed a more stringent state pH limit on
20 Weyerhaeuser by making the federal "variance" provisions inapplicable
21 to exceedances such as those at issue. DOE has done this because of
22 a concern for water quality. Under these circumstances, we are
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1 pursued that the pH range applicable to Weyerhaeuser's Longview
2 operations does not qualify as "technology based" for the purposes of
3 the upset defense regulation.
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5 We note that the limits themselves are not under appeal. This
6 is an enforcement action which raises the question of how the
7 established limits should be characterized. Therefore, we need not
8 and do not consider issues about whether Weyerhaeuser was
9 appropriately informed of the water quality basis for the limitations
10 in the permit issuance process.

11 VII

12 We further conclude that even if the upset defense were a part
13 of the permit, appellant did not prove such an affirmative defense in
14 this case. Our conclusion rests on two findings any one of which
15 would be enough to preclude the defense:

16 1) the noncompliance was attributable to inadequate treatment
17 facilities and inadequate maintenance, and not to factors beyond the
18 reasonable control of the permittee (Finding of Fact XII); and 2) the
19 instances of noncompliance are part of a pattern of violations and
20 not, therefore, each an exceptional incident. (Finding of Fact
21 XIV). See, SPIRG of New Jersey v. Georgia Pacific, 615 F.Supp. 1419,
22 1431 (1985).

23 VIII

24 In sum, we conclude appellant Weyerhaeuser has exceeded the pH
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1 effluent limitations in NPDES Permit No. WA-000012-4, and that no
2 lawful defense is available. The question remaining, then, is
3 whether the penalties assessed were appropriate.

4 RCW 90.48.144 authorizes the issuance of a penalty for the
5 violation of the terms of a waste discharge permit of "up to ten
6 thousand dollars a day for every such violation". The statutory
7 ceiling on this penalty was raised in 1985, reflecting a legislative
8 intention to treat actions contravening the water pollution control
9 statute with increased seriousness. Section 2, Chapter 316, Laws of
10 1985. Bud Vos v. DOE, PCHB No. 86-149 (May 8, 1987).

11 IX

12 Under RCW 90.48.144:

13 The penalty amount shall be set in consideration of the
14 previous history of the violator and the severity of
15 the violations impact on public health and/or the
environment in addition to other relevant factors.

16 We have in past cases, regarded corrective actions taken after
17 noncompliance by the violator as among the "other relevant factors,"
18 See, e.g., Jensen's Dairy v. DOE, PCHB No. 84-240 (1984). Remedial
19 actions are relevant because the principal purpose of civil penalties
20 is to influence behavior and deter future violations. See Cosden Oil
21 Co. v. DOE, PCHB 85-111, (1986). The most influential post-violation
22 activities therefore, are those occurring between the time the
23 violation occurred and the time the penalty was assessed.

X

Applying the several factors to be weighed in this case, we are impressed particularly by the history of violations - looking back at the Weyerhaeuser Longview complex as a whole and at the pH problem in particular.

Given such a continuing pattern of violations, the assessment of penalties even after the company had proposed corrective measures was consistent with the statutory purpose. The idea is to apply the heat until the problem is solved. Where the problem has remained unsolved prior to the issuance of the penalty, proposals then extant for correction do not justify wholesale mitigation. This is especially true here where the exceedances which occurred were of a type and magnitude which could reasonably have been foreseen and prevented by obvious means.

Moreover, the failure to present evidence on demonstrated harm does not much affect the appropriateness of penalty amounts in a NPDES permit violation case. The whole premise of the federal Clean Water Act, which the state implements through permit issuance under its own statutes, is that environmental harm does not need to be shown. The scheme is, in general, one of strict liability for unlawful discharges. See SPIRG, supra, at 1424. In the broad sense, harm is legislatively presumed.

Nonetheless, we conclude that some recognition should be given to

1 Weyerhaeuser's preliminary efforts in December 1986 to plan for a
2 remedy of the situation, before issuance of the \$20,000 penalty No. DE
3 87-103. We believe some lowering of that penalty is merited.

4 XI

5 Any Finding of Fact which should be deemed a Conclusion of Law is
6 hereby adopted as such.


7 From these Conclusions of Law the Board enters this
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ORDER

Department of Ecology Order No. DE 86-714 is AFFIRMED in its entirety. Order No. DE 87-103 is reduced by \$7,500 to \$13,500 and AFFIRMED in all other respects.

SO ORDERED this 28th day of March, 1988.

POLLUTION CONTROL HEARINGS BOARD


JUDITH A. BENDOR, Presiding


WICK DUFFORD, Chairman

[See Dissenting Opinion]
LAWRENCE J. FAULK, Member

1 DISSENTING OPINION - LAWRENCE J. FAULK
2 PCHB Nos. 86-224 & 87-33

3 INTRODUCTION

4 I respectfully dissent from the majority opinion. It seems to me
5 that for this Board to impose two fines totaling \$22,500 (reduced from
6 \$30,000 imposed by DOE) for three minor infractions; one of which was
7 caused by a power outage not within appellant's control, for a total
8 time of infractions something less than one hour is not justified
9 under the circumstances of this particular case.

10 The following opinion sets out my reasoning for that judgment.

11 FINDINGS OF FACT

12 I

13 The NPDES permit alleged to have been violated was issued by the
14 Department of Ecology to Weyerhaeuser on October 7, 1985. The permit
15 authorizes Weyerhaeuser to discharge wastewaters to the Columbia River
16 pursuant to conditions and limitations.

17 The permit requires that the pH of wastewater discharged pursuant
18 to the permit retain within a specific range, i.e., between 5.0 and
19 9.0 all times. The permit requires that the pH of the discharge be
20 monitored and recorded continuously. The permit regulates discharges
21 through two outfalls designated by Weyerhaeuser as 001 and 002. The
22 total volume of water discharged through these outfalls averages about
23 65 million gallons per day.

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II

Although by far the greatest volumes of wastewater discharged through outfall 001 and 002 is generated by Weyerhaeuser's pulp and paper manufacturing operations at Longview, Weyerhaeuser's chlorine plant discharges clean wastewaters (i.e., non-contact cooling water and stormwater from the chlorine plant area) to the effluent lines that carry wastewaters from the pulp and paper facilities' sewage treatment plant to the Columbia River. Clean wastewaters from the chlorine plant discharged this water amount to approximately three million gallons per day. (Clean wastewaters discharged with the treated pulp and paper effluent through outfalls 001 and 002 do not go through the mill's sewage treatment plant.)

III

Weyerhaeuser's chlorine plant is located along the Columbia River adjacent to the company's Longview pulp and paper manufacturing facility. The chlorine plant was put into operation in 1955. It has been expanded and processes changed in phases during 1967 and 1975. The chlorine plant produces chlorine, sodium hydroxide, hydrogen gas, hypochlorite, and hydrochloric acid. Approximately 80 employees work at the chlorine plant in three shifts. The plant operates 360 days a year. The chlorine plant covers about 25 acres.

IV

There are three other chemical manufacturing facilities in this

1 state comparable to Weyerhaeuser's chlorine plant. They are operated
2 by Georgia-Pacific in Bellingham, and Occidental Chemical Company and
3 Pennwalt Corporation, both in Tacoma. These three facilities have
4 wastewater discharges to waters of the state which are regulated by
5 NPDES permits issued by the Department of Ecology. The Occidental and
6 Pennwalt permits allow short term variations in pH not allowed by
7 Weyerhaeuser's permit. The exceedences at issue here would not have
8 been reportable violations of the Occidental or Pennwalt permits.

9
10 V

11 On July 27, 1986, Weyerhaeuser discharged wastewaters with a pH
12 below the minimum of 5.0 for 14 minutes. The minimum pH reached that
13 day was 1.5. This low pH discharge occurred when a specific gravity
14 sight glass in the chlorine plant failed and a spill of concentrated
15 hydrochloric acid resulted. The leaking acid escaped to the chlorine
16 plant clean water sewer. The operators of the chlorine plant quickly
17 detected the leak and shut off the acid. Weyerhaeuser had equipment
18 to neutralize the acid in place. This equipment consisted of a lime
19 rock sump and an apparatus to detect the pH of wastewaters in the
20 clean water sewer and to, if necessary, automatically inject sodium
21 bicarbonate to the sewer. Both these systems were in operation, but a
22 discharge of low pH wastewater occurred nonetheless. Weyerhaeuser
23 claimed in its letter report to the Department of Ecology covering
24 this incident, and before this Board, that the July 27, 1986 incident
25 should be excused as an "upset."

VII

On October 23, 1986, at approximately 5:00 a.m., the chlorine plant suffered a plant-wide power outage. The power outage was caused by a failure in equipment owned and maintained by Cowlitz County PUD. The power outage disabled the chlorine plant's pumps, pH probes and pH neutralization apparatus. Disabling the plant's pumps led to widespread flooding and to contamination of the plant's clean water sewer with high pH caustic. By the time partial power was restored two hours later the caustic contamination was in the clean water sewer downstream from the caustic neutralization apparatus.

When partial power was restored, one of the three pumps available to move water in the sewer from the chlorine plant to the pulp mill's effluent lines, through which it would flow to the Columbia River through outfalls 001 and 002, was started at a reduced rate intended to lower the level of standing water in the chlorine plant while avoiding any pH violation. This effort initially was not a complete success. There was a 24 minute period when the pH of the wastewaters discharged through outfalls 001 and 002 was higher than the permitted maximum of 9.0. The highest level reached was 11.3.

Weyerhaeuser's Region Environmental Engineer phoned the Department of Ecology on October 24, 1986, to report the upset and resulting pH exceedence. Weyerhaeuser contended before this Board that the incident was an "upset."

VIII

On November 12, 1986, performance of routine maintenance activities at the chlorine plant caused the clean water sewers to become contaminated with caustic. The caustic in the clean water sewers was detected by the chlorine plant's pH probes and sulfuric acid was automatically pumped into the sewer to neutralize the caustic. The acid did neutralize the caustic, but due to a malfunction of the acid flow controller, much more acid was injected than was necessary. The chlorine plant operators quickly shut off the acid flow when the low pH in the sewer was shown on their instruments. There was, nevertheless, a 23 minute period when the wastewaters discharged through outfalls 001 and 002 had a pH of less than the permitted minimum of 5.0. The minimum pH reached was 2.0. Subsequent investigation indicated that excess acid was added because the control mechanism on the acid injection pump stuck in an "on" position.

Weyerhaeuser reported this incident as an "upset" to the Department of Ecology and maintained that position before this Board.

IX

Weyerhaeuser has maintained in recent years an exceptionally high rate of compliance with the pH limitation in permit WA 000012-4. The rate of compliance was over 99% for 1984 and 1985. For 1986, Weyerhaeuser's rate of compliance exceeded 99.9%. For 1987, as of the

1 date of the hearing, Weyerhaeuser had maintained a 100% compliance
2 rate. The U.S. Environmental Protection Agency, in a development
3 document prepared in conjunction with 1980 modifications to the
4 federal pH exception policy (see, 40 CFR 401.17), recognized that 99%
5 compliance was the best that could be expected of "best practical
6 control technology."

7 X

8 Weyerhaeuser has had problems in the past maintaining 100%
9 compliance with the pH limitation. As one way to improve its ability
10 to control pH, Weyerhaeuser in 1980 began to pump the chlorine plant's
11 clean water discharge into the effluent lines connecting the pulp
12 mill's sewage treatment plant to outfalls 001 and 002 instead of
13 directly to the Columbia River. In 1985 and 1986, following notice to
14 the Department of Ecology, Weyerhaeuser instituted an additional
15 series of projects to enhance its ability to control the pH of
16 wastewaters discharged from the chlorine plant. Those projects cost
17 Weyerhaeuser approximately \$117,000.

18 In December, 1986, in a letter to the Department of Ecology,
19 Weyerhaeuser identified an additional package of projects to enhance
20 its ability to control pH. Those projects were fed back to
21 Weyerhaeuser in the form of Order DE 87-104. Completion of that
22 package cost Weyerhaeuser approximately \$66,000.
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The 1985-86 package of control enhancement projects was completed before the July 27, pH exceedence. Weyerhaeuser had enjoyed six months of 100% compliance with the pH limit before the July 27 incident. The projects ultimately incorporated into Order DE 87-104 were proposed to the Department of Ecology before the notice of the \$20,000 penalty appealed here was issued to Weyerhaeuser.

XI

The Department of Ecology admitted that it has no evidence that actual injury to any aquatic life in the Columbia River resulted from the three pH exceedences at issue here. The evidence which was presented was that sufficient dilution was available at the time the discharges occurred to, at least, bring the pH of their water at the boundary of Weyerhaeuser's dilution zone to levels which could pose any threat to aquatic life. The evidence was, further, that the area of river in the vicinity of the outfall is used by fish only as a migration pathway and that the very short duration of the pH exceedences ruled out any measureable adverse effects on fish.

XII

The Columbia River in the vicinity of Weyerhaeuser's outfalls 001 and 002 is not a "water quality limited" stream segment for pH. The Department of Ecology did not prepare "total maximum daily loads," a "load allocation" for pH, and a "waste load allocation" for pH of wastewaters discharged from Weyerhaeuser's Longview facility. See, 40 CFR 130. esp. 130.7.

XIII

The Department of Ecology's Industrial Sections' pH policy was cited by the Department as the basis for pH limitation in NPDES permit WA 000012-4. The Industrial Section in that policy rejected the EPA pH exemption policy because the EPA policy was seen as allowing potentially toxic wastewaters to be discharged without controls. The Industrial Section pH policy did not identify the need to meet water quality standards for pH as the basis for the pH limitation imposed.

XIV

The Department of Ecology prepared a "fact sheet" concerning NPDES permit WA 000012-4 when that permit was published in draft prior to issuance. The "fact sheet" includes Ecology's identification of the basis of effluent limitations in the permit. The Department of Ecology did not identify the need to meet water quality standards in the Columbia River as the basis for the pH limitation in the fact sheet.

XV

The pH limitation in the draft permit was commented upon by Weyerhaeuser. The Department of Ecology acknowledged Weyerhaeuser's comments, but did not change the draft permit prior to issuance with respect to pH. The Department of Ecology in its written response to Weyerhaeuser's comments did not identify the need to meet water quality standards as the basis for the pH limitations. The Department

1 of Ecology did not connect water quality standards with the pH
2 limitation in any oral discussions with Weyerhaeuser personnel. The
3 Department of Ecology did, in the fact sheet, the Industrial Section
4 policy, in its written response to Weyerhaeuser's comments and in oral
5 statements to Weyerhaeuser personnel identify the basis for the permit
6 limits as being the requirement under state law to use all known,
7 available and reasonable methods of waste treatment.

8 XVI

9 Any Finding of Fact deemed a Conclusion of Law is hereby adopted
10 as such. From these Findings of Fact, I make these

11 CONCLUSIONS OF LAW

12 I

13 An "upset" is defined by EPA as

14 . . . an exceptional incident in which there is
15 unintentional and temporary noncompliance with
16 technology-based permit effluent limitations
17 because of factors beyond the reasonable control of
18 the permittee.

19 40 CFR 122.41(n)(1). An "upset" is an affirmative defense to
20 liability in an action based on noncompliance with NPDES permit
21 effluent limitations.

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II

In Condition G.12 included in NPDES permit WA 000012-4, the Department of Ecology gave Weyerhaeuser the ability to claim the "upset" defense as established by EPA's regulations.

III

The Board should conclude that the "upset" defense applies to the three pH exceedences at issue in this case and, therefore, that Weyerhaeuser has no liability for these civil penalties assessed. The basis for that judgment is as follows:

A. Weyerhaeuser established that the three incidents were "exceptional" in that none of the basic causes of the three pH exceedences had occurred before or was considered likely. While the Department of Ecology claimed that Weyerhaeuser had many pH exceedences, the Department's evidence predated the improvement projects that Weyerhaeuser undertook in 1985, 1986 and 1987. Other than this generic indictment, the Department did not deny with evidence that the three incidents leading to penalties appealed here were extraordinary, unusual events.

B. There was no evidence that the three pH exceedences were anything but "unintentional and temporary" incidents of noncompliance with Weyerhaeuser's pH limit.

C. The Board should conclude that the pH limit included in Weyerhaeuser's permit is a technology-based permit effluent limitation

1 within the meaning of the EPA regulations cited above. Remarks
2 published by EPA in 1984 at the time of this regulation was reviewed
3 (see, 49 Fed. Reg. 38038-38039 (Sept. 26, 1984)) indicate clearly
4 that EPA intended to include under the rubric of technology-based
5 permit effluent limitations any permit limitations not required
6 specifically to assure that water quality standards would be met.
7 Weyerhaeuser showed that the Department of Ecology based its permit
8 limitations on the requirement to use all known, available and
9 reasonable treatment technology. While the Department alleged that
10 the pH limitation was based on a requirement to avoid toxic waste
11 discharges, the Department did not establish that the pH limit was
12 specifically included in the permit to meet water quality standards.
13 The Department, indeed, did not even provide a reference to the
14 applicable standard for pH. (See, WAC 173-201-045(2)(c)(v)).

15 D. All three pH exceedences were caused by factors beyond
16 Weyerhaeuser's reasonable control. In July, 1986, the exceedence was
17 caused by a leak in one of two specific gravity sight glasses which
18 had been installed literally decades before and had functioned without
19 incident up to the time the acid spill occurred. In October, 1986, a
20 plant-wide power outage resulted in caustic contamination of the clean
21 water sewer. The electrical equipment which failed was not owned or
22 operated by Weyerhaeuser. EPA, in the comments referred to above,
23 uses a power outage as an example of an event which might constitute
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1 an "upset". In November, 1986, automatic neutralization apparatus
2 which successfully neutralized caustic contamination in the clean
3 water sewer struck in an "on" position and resulted in a low pH
4 discharge.

5 IV

6 I have considered the Department of Ecology's arguments against
7 application of the "upset" defense here and reject them. My
8 conclusions in that regard are as follows:

9 A. The Department of Ecology claimed that the three pH
10 exceedences occurred because Weyerhaeuser had inadequate treatment
11 facilities. The Department used as evidence of this contention the
12 fact that the violations occurred and that Weyerhaeuser's subsequent
13 installation of additional control equipment would have prevented the
14 violations. I do not find this persuasive. The Department had no
15 evidence that Weyerhaeuser's treatment facilities were inadequate
16 before these incidents occurred. The Department of Ecology's claim
17 that the violations themselves are proof of inadequate treatment
18 facilities basically denies the whole concept of the "upset" defense.

19 I therefore reject that interpretation as too narrow. I do not
20 believe EPA adopted regulations allowing the "upset" defense and at
21 the same time defined the defense out of existence. That, however, is
22 the import of Ecology's argument.
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1 B. The Department claimed that Weyerhaeuser failed to show the
2 chlorine plant was being operated properly at the time the July and
3 November pH exceedences occurred. As evidence, with respect to the
4 July incident, the Department claims that a lime rock sump was not
5 being maintained. With respect to the November incident the
6 Department claims that chlorine plant personnel were draining caustic
7 from a drowning tower at a rate which exceeded capacity of a pipe
8 carrying the caustic to the pulp mill's sewage treatment plant. I do
9 not accept the Department's claim. In neither event was the alleged
10 improper operation the proximate cause of the pH exceedence.
11 Weyerhaeuser established that the lime rock sump, even if filled to
12 capacity, likely would not have prevented the pH exceedence. This is
13 because the chlorine plant's operators, when they designed the
14 automatic acid neutralization facilities, relied on past experience as
15 their guide and a spill of the magnitude which occurred in July, 1986,
16 had not happened before that time. While I could have found the
17 Department's argument persuasive with respect to the November 1986,
18 incident if the pH exceedence had been due to the discharge of excess
19 caustic, that was not the cause of the exceedence. Rather, the
20 problem was that due to a malfunctioning flow meter excess acid was
21 discharged.

22 C. The Department contends that Weyerhaeuser failed to provide it
23 with the proper notice of the upsets involved here. I reject this
24 contention.
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1 In the first place, the applicable EPA rule is not clear whether
2 telephone notice and five day written notice must be provided when
3 both sides agree that the upset posed no threat of harm to public
4 health or the environment. The Department did not get notice that
5 Weyerhaeuser would be claiming the "upset" defense by letter and, in
6 one incident by way of a telephone call within 24 hours. Weyerhaeuser
7 provided this notice and its explanation of the three incidents in
8 writing to the Department long before the Department issued the
9 penalties appealed here.

10 In the second place, I am disinclined to strictly apply the notice
11 requirement as the Department interprets it. The Department did not
12 present evidence that it informed Weyerhaeuser of the Department's
13 interpretation of the notice requirement. The Department did not even
14 bring up the notice issue until final argument. The Department
15 received notice of the permit exceedences in the usual way and in the
16 way the permit requires. The Department did not present any evidence
17 to show that it suffered prejudice by receiving notice when it did.
18 The Department, in fact, objected to questioning about the
19 Department's response when a notice of an "upset" is received. The
20 Department's theory in this case acknowledged that the Board's review
21 is de novo, and that the Board considers the Department's issuance of
22 a notice of penalty to be equivalent to a summons and complaint. I
23 find these acknowledgements

1 to be inconsistent with the Department's claim that Weyerhaeuser lost
2 the "upset" defense by failing to comply strictly with the
3 Department's interpretation of EPA's notice regulation.

4 V

5 I conclude that Weyerhaeuser has no liability for civil penalties
6 based on noncompliance with the pH limitation on July 27, October 23
7 and November 1, 1986. I conclude that the Department of Ecology's two
8 notices of penalty appealed here should be deemed void and of no
9 effect.

10 VI

11 Even without resort to the "upset" defense, I find little
12 justification for these exorbitant penalties and would reduce the
13 amount of any penalties to zero. Clearly none of the incidents which
14 led to noncompliance was intentional. They were all exceedingly short
15 duration. The evidence was that none of the incidents caused any harm
16 to aquatic life. These incidents occurred after Weyerhaeuser had on
17 its own spent over \$100,000 to improve its ability to control the pH
18 of clean wastewaters discharged from the chlorine plant and had
19 enjoyed six months of 100% compliance. Weyerhaeuser proposed even
20 more improvements on its own in December, 1986 before the \$20,000
21 notice of penalty appealed here was imposed. I have concluded that
22 Weyerhaeuser's noncompliance incidents should be excused as "upsets"
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1 but even if they were not, I would find no justification for any
2 penalties based on these incidents.
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4  3/25/88
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6 LAWRENCE J. FAULK, Member
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